

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Robert M. Moriarty et al.
Title: PROCESS FOR STEREOSELECTIVE
SYNTHESIS OF PROSTACYCLIN
DERIVATIVES
Prior Appl. No.: Div. of 09,754,107
Prior Filing Date: January 5, 2001
Examiner: Sikarl A. Witherspoon
Art Unit: 1621

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §1.56

Mail Stop PATENT APPLICATION
Commissioner for Patents
PO Box 1450
Alexandria, Virginia 22313-1450

Sir:

Applicants submit herewith on Form PTO/SB/08 a listing of the documents cited by or submitted to the U.S. PTO in parent application Serial No. 09/754,0107, filed 01/05/2001. As provided in 37 CFR §1.98(d), copies of the documents are not being provided since they were previously submitted to the United States Patent & Trademark Office in the above-identified parent application.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

TIMING OF THE DISCLOSURE

The listed documents are being submitted in compliance with 37 CFR §1.97(b), within three (3) months of the filing date of the application.

RELEVANCE OF EACH DOCUMENT

The relevance of the foreign-language document is explained in the parent application.

Applicants respectfully request that any listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Respectfully submitted,

Date

August 27, 2003

FOLEY & LARDNER

Customer Number: 22428



22428

PATENT TRADEMARK OFFICE

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Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT Date Submitted: August 27, 2003 <i>(use as many sheets as necessary)</i>				Complete if Known	
				Application Number	Prior Appl. 09/754,107
				Filing Dat	Prior Filing Dat - January 5, 2001
				First Named Inventor	Robert M. Moriarty
				Group Art Unit	1621
				Examiner Name	Sikarl A. Witherspoon
Sheet	1	of	2	Attorney Docket Number	080618-0217

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
	A1	6,441,245		MORIARTY ET AL.	08/27/2002	
	A2	5,153,222		TADEPALLI ET AL.	10/1992	

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³	Number ⁴	Kind Code ⁵ (if known)				
	A3	EP	0 087 237	A1		08/1983		
	A4	WO	98/39337			09/1998		

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
	A5	BELCH et al., "Randomized, Double-Blind, Placebo-Controlled Study Evaluating the efficacy and Safety of AS-013, a Prostaglandin E ₁ Prodrug, in Patients With Intermittent Claudication," Circulation, Vol. 95, No. 9, American Heart Association Inc., pp. 2298-2302; May 6, 1997.	
	A6	NELSON, "Prostaglandin Nomenclature," Journal of Medicinal Chemistry, Vol. 17, No. 9, American Chemical Society, pp. 911-918, September 1974.	
	A7	Takano et al., "Enantiodivergent Synthesis of Both Enantiomers of Sulcatol and Matsutake Alcohol from (R)-Epichlorohydrin," Chemistry Letters, The Chemical Society of Japan, pp. 2017-2020, 1987.	
	A8	MATHRE et al., "A Practical Enantioselective Synthesis of α,α -Diaryl-2- Pyrrolidinemethanol, Preparation and Chemistry of the Corresponding Oxazaborolidines," J. Org. Chem., Vol. 56 No. 2, American Chemical Society, pp. 751-752, 1991.	
	A9	PAGENKOPF, "Substrate and Reagent Control of Diastereoselectivity in Transition Metal-Mediated Process: Development of a Catalytic Photo Promoted Pauson-Khand Reaction," Caplus 1999, Abstract XP-002097925.	
	A10	KHAND et al., "Organocobalt Complexes. Part II. Reaction of Acetylenehexacarbonyldicobalt Complexes, (R ¹ C ₂ R ²)Co ₂ (CO) ₆ , with Norbornene and its Derivatives," J. Chem. Soc., J.C.S. Perkin I., pp. 977-981, 1963.	
	A11	PAUSON, "A Convenient and General Route to a Wide Range of Cyclopentenone Derivatives," Tetrahedron, Vol. 41, No. 24, Pergamon Press Ltd., pp. 5855-5860, 1985.	

Examiner Signature	Date Considered
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

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Sheet	2	of	2	Attorney Docket Number	080618-0217

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
	A12	SCHORE, "Transition-Metal-Mediated Cycloaddition Reactions of Alkynes in Organic Synthesis," Chem. Rev., Vol. 88, American Chemical Society, pp. 1081-1119, 1988.	
	A13	SHAMBAYATI et al., "N-Oxide Promoted Pauson-Khand Cyclizations at Room Temperature," Tetrahedron Letters, Vol. 31 No. 37, Pergamon Press, pp. 5289-5292, 1990.	
	A14	JEONG et al., "Catalytic Version of the Intramolecular Pauson-Khand Reaction," J. Am. Chem. Soc., Vol. 116, American Chemical Society, pp. 3159-3160, 1994.	
	A15	CHUNG et al., "Promoters for the (Alkyne) hexacarbonyldicobalt-Based Cyclopentenone Synthesis," Organometallics, Vol. 12, American Chemical Society, pp. 220-223, 1993.	
	A16	HICKS et al., "A Practical Titanium-Catalyzed Synthesis of Bicyclic Cyclopentenones and Allylic Amines," J. Org. Chem., Vol. 61 No. 8, pp. 2713-2718, 1996.	
	A17	ZHANG et al. "A Nickel(O)-Catalyzed Process for the Transformation of Enynes to Bicyclic Cyclopentenones," J. Org. Chem., Vol. 61 No. 14, pp. 4498-4499, 1996.	
	A18	PAGENKOPF et al., "Photochemical Promotion of the Intramolecular Pauson-Khand Reaction. A New Experimental Protocol for Cobalt-Catalyzed [2+2+1] Cycloadditions," J. Am. Chem. Soc., Vol. 118 No. 9, American Chemical Society, pp. 2285-2286, 1996.	

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶

Examiner Signature		Date Considered	
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